

REMARKS

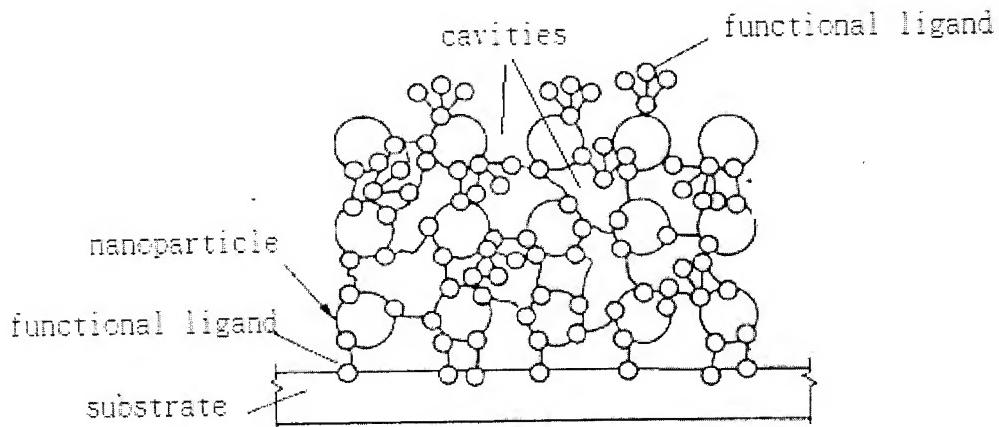
Claims 1, 7-9, 14, and 16 are presently under consideration in this application. Claims 2-5, 10-13, 15 and 18-34 have been withdrawn from consideration as the result of a restriction requirement.

Response to Rejection Under 35 U.S.C. § 103(a)

Claims 1, 9, 14, and 16 are rejected under 35 U.S.C. § 103 (a) as allegedly being obvious over Vossmeyer in view of Perez. Claims 7-8 are rejected under 35 U.S.C. § 103 as allegedly being obvious over Vossmeyer in view of Perez, and further in view of Peng.

Applicants respectfully traverse the rejections for the reasons discussed below.

Vossmeyer teaches a nanoparticle structure for detecting one or more analytes and a sensor employing the nanoparticle structure. Vossmeyer provides functional ligands to bond nanoparticles with each other and a substrate forming a plurality of cavities therebetween, as shown below:



When a specific compound fills into the cavities, the electrical conductivity of the substrate would be rendered, thereby achieving accurate detection. **It should be noted that the cavities are not formed by molecularly imprinting with a template molecule.** Vossmeyer does not teach or suggest forming cavities by molecularly imprinting and subsequently removing the templates.

Perez discloses polymerizing a “pure organic monomer” via a two-stage polymerization to form core-shell nanoparticles, and bonding the core-shell nanoparticles to a template and subsequently removing the templates. It should be noted that the term “nanoparticle” of Perez means polymer nanoparticles (pure organic monomer), whereas the term “nanoparticles” of the present invention means semiconductor-nanoparticles (inorganic compound).

Claim 1 teaches bonding the nanoparticles with templates via molecular imprinting first. Next, the results are polymerized by functional monomer, initiator and crosslinking agent to form a matrix. Finally, the templates are removed to obtain a biochemical labeling material.

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is Applicants’ belief that neither Vossmeyer nor Perez discloses the limitations “bonding templates to a semiconductor nanoparticle” and “polymerizing the nanoparticle bonded with templates.”

As noted above, the Examiner cites references, which, when taken alone or in combination, fail to teach the recitations of “bonding the nanoparticles to template molecules by

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molecular imprinting, wherein the nanoparticles are semiconductor," as recited in claim 1 of the present application.

For at least these reasons, the prior art fails to disclose or render obvious the method of independent claim 1 of the invention. It is Applicants' belief that all claims depending from claim 1 are allowable for at least the same reasons as claim 1.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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